GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

STARRED QUESTION NO:241
ANSWERED ON:16.12.2015
Condition based monitoring system
Gavit Dr. Heena Vijaykumar;Mahadik Shri Dhananjay Bhimrao

Will the Minister of RAILWAYS be pleased to state:

(a) the existing mechanism to monitor the health of Railway track and rolling stock;
(b) whether any long-term plan has been drawn to replace/improve tracks/rolling stock and if so, the details thereof;
(c) whether the Railway is in the process of introducing Condition Based Monitoring System (CBMS) aiming to bring down the accident rates and if so, the details thereof;
(d) whether the Railways proposes to involve global firms in the project in line with 'Make in India' programme and if so, the details thereof along with the steps taken by the Government so far in this regard; and
(e) the other steps taken/being taken by the Government to prevent train accidents in the country?

Answer

MINISTER OF RAILWAYS
(SHRI SURESH PRABHAKAR PRABHU)
(a) to (e): A Statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO. 241 BY DR. HEENA VIJAYKUMAR GAVIT AND SHRI DHANANJAY MAHADIK TO BE ANSWERED IN LOK SABHA ON 16.12.2015 REGARDING CONDITION BASED MONITORING SYSTEM

(a) & (b) Railway is undertaking monitoring of Railway Tracks as per laid down systems which, inter alia, includes daily monitoring by Keyman, monitoring at pre-defined interval by various levels of inspecting officials and monitoring of track parameters by track Recording Cars and Oscillation Monitoring Systems.

Maintenance, upkeep and improvement in the condition of coaches is a continuous process and this is carried out periodically during laid down maintenance schedule in open line, as well as periodic overhauls in Workshops. Besides this, coaches are also given a 'Mid-life' rehabilitation to restore their condition. As part of Indian Railways Modernization Program, we shall be completely switching over to manufacturing current state-of-the-art LHB coaches in our Production Units in the next Four years.

Coaches are periodically replaced on age-cum-condition basis, after attaining their prescribed codal life. Besides, continual improvement in quality of coaching stock is done through development of new designs and retrofitment on existing coaches.

(c) & (d) Yes, Madam. Indian Railways wishes to install railway vehicle mounted "On Board Rolling Stock Condition Monitoring System" that will monitor the health and safety of key components of the coaches, freight cars, locomotives that would finally result in improved safety, improved reliability, higher utilization, increased up-time and reduced operation cost of the railway assets by enabling Predictive Maintenance and reduction in sudden catastrophic failures of these assets.

For Inducting high technology and for adopting internationally proven Software Embedded Electronic Railway Signalling Systems in Railway Signalling, Cross Acceptance/Approval policy is being followed by Research Designs and Standards Organisation (RDSO) for registering Global Firms as approved vendors wherein approval for systems that are satisfactorily functioning in other advanced railway systems are speedily scrutinized for approval into Indian Railways.

As a path-breaking effort of Indian Railways, an Expression of Interest (EoI) for development of 'On-Board Rolling Stock Condition Monitoring System' has been called for. Offers against this EoI have been received from both - Indian and Global firms. Since such a system shall be tried out on Indian Railways, the specifications of the same are being firmed up.

When Indian Railways call for the bid for procurement of such systems, the bidders will be asked to submit their plan for indigenization of such systems under "Make in India" along with their offers.

(e) Safety is accorded the highest priority by Indian Railways and all possible steps are undertaken on a continual basis to prevent accidents and to enhance safety. To enhance the safety of Rolling Stock as well as that of track, numerous Electronic in-motion weigh bridges, Wheel Impact Load Detectors (WILD) that measure the hammering impact of an out of round wheel on the rails, Block Proving Axle Counters, Auxiliary Warning System, Colour Light LED Signals, Vigilance Control Device have been installed. In addition, Indian Railway is using 60 kg rails and Pre-stressed Concrete Sleepers, long rail panels, better welding technology, progressive use of Linke Hofmann Busch (LHB) Coaches, Centre Buffer Couplers with Integral Coach Factory Coaches etc.

One Track side bogie monitoring system has been installed in Northern Railway at Bakkas near Lucknow to monitor and identify the axle bearings that are likely to become defective. The device gives an alarm on detecting a defective or "likely to become defective" axle bearing when a coach/wagon/locomotive passes in front of the system.

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